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EXAMINER	
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ART UNIT	PAPER NUMBER
2152	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/663,125	KAMINSKY ET AL.	
	Examiner	Art Unit	
	PHILIP C. LEE	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *1-5* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment and remarks filed on February 20, 2008.

2. Claims 6-17 are presented for examination and claims 1-5 are withdrawn from consideration.

3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Objection

4. Claim 12-17 are objected to because according to MPEP 608.01, antecedent basis for the terms appearing in the claims, while an applicant is not limited to the nomenclature used in the application as filed, he or she should make appropriate amendment of the specification whenever this nomenclature is departed from by amendment of the claims so as to have clear support or antecedent basis in the specification for the new terms appearing in the claims. Applicant will be required to make appropriate amendment to the description to provide clear support or antecedent basis for the terms appearing in the claims provided no new matter is introduced.

5. The objection as stated above requires applicant to make appropriate amendment to the description because the specification is objected to as failing to provide proper antecedent basis

for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "machine readable storage".

Claim Rejections – 35 USC 112

6. Claims 7 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following terms lack proper antecedent basis:

i. the group – claims 7 and 13 (examiner suggests amending "the group" to "a group").

Claim Rejections – 35 USC 103

7. Claims 6-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maltz et al, U.S. Patent Application Publication 2002/0143929 (hereinafter Maltz) in view of Nozawa et al, U.S. Patent 6,272,543 (hereinafter Nozawa).

8. Maltz and Nozawa were cited in the previous office action.

9. As per claims 6 and 12, Maltz teaches the invention substantially as claimed comprising:

detecting a node in the cluster which requires re-configuration ([0068]-[0069] and [0073]) (detecting scheduled collection/transmission of statistics);

identifying a workload hosted by said node ([0068]) (generating statistical summaries based on collected traffic information and storing the statistic in repositories (i.e. database)) and retrieving a set of configuration parameters associated with said workload ([0070], [0076], [0033]) (retrieved the data stored in repositories as input);

producing a new generation of configuration parameters based upon said retrieved set using a computing process ([0033] and [0125]) (create configuration based on retrieved data stored in repositories using an algorithm); and,

reconfiguring said node with selected ones of said new generation of configuration parameters ([0033] and [0036]).

10. Although Maltz teaches using genetic computing process ([0049]), however Maltz does not specifically teach producing new generation of configuration parameter using a genetic computing processing. Nozawa teaches producing new generation of configuration parameter using a genetic computing processing (col. 6, line 66-col. 7, line 2; col. 7, lines 26-30; col. 8, lines 19-25).

11. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Maltz and Nozawa because Nozawa's teaching of genetic computing process would enhance the configuration of Maltz's system by allowing genetic computing process to search for optimal configuration for the system.

12. As per claims 7 and 13, Maltz and Nozawa teach the invention substantially as claimed in claims 6 and 12 above. Maltz further teach wherein said detecting step comprises the step of detecting at least one condition selected from the group consisting of a node crash, node idleness, node underperformance, and a change in workload hosted in said node ([0073]).

13. As per claims 8 and 14, Maltz and Nozawa teach the invention substantially as claimed in claims 6 and 12 above. Nozawa further teach wherein said producing step comprises the steps of: performing a crossover operation for said configuration parameters in said retrieved set (col. 7, lines 6-16); and, mutating at least one element of said configuration parameters in said retrieved set to produce the new generation of configuration parameters (col. 7, lines 17-30).

14. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Maltz and Nozawa for the same reason as claims 6 and 12 above.

15. As per claims 9 and 15, Maltz and Nozawa teach the invention substantially as claimed in claims 8 and 14 above. Maltz and Nozawa further teach wherein said reconfiguring step comprises the steps of: randomly selecting a new configuration from among said new generation of configuration parameters (see Nozawa, col. 7, lines 6-9, 20-22; see Maltz, [0126]); determining whether said randomly selected new configuration is viable (see Maltz, [0126]);

and, reconfiguring said node with said randomly selected new configuration only if said new configuration is determined to be viable (see Maltz, [0127]).

16. As per claims 10 and 16, Maltz and Nozawa teach the invention substantially as claimed in claims 9 and 15 above. Maltz further teach comprising the step of writing said randomly selected new configuration to a knowledge base if said randomly selected new configuration is determined to be viable ([0127], [0064], [0037], [0046]) (after configuring the node with viable configuration ([0127], [0064]), the optimization process repeats ([0037], [0046]), which including writing to repositories (430, fig. 4; [0037]).

17. As per claims 11 and 17, Maltz and Nozawa teach the invention substantially as claimed in claims 9 and 15 above. Maltz and Nozawa further teach comprising: measuring node performance for said reconfigured node (see Maltz, [0068],[0071],[0073], see Nozawa, col. 6, lines 58-61); and, if said reconfigured node fails to meet baseline objectives for performance for said reconfigured node (see Nozawa, col. 6, lines 58-63), selecting the new configuration for said node (see Maltz, [0126]; see Nozawa, col. 6, lines 63-64)and performing said determining and reconfiguring steps for said selected new configuration ([0126], [0127]).

CONCLUSION

18. Applicant's arguments with respect to claims 6-17, filed 2/20/08 have been fully considered but they are not persuasive.

19. In the remark, applicant argued that:

(1) The claims being objected to are originally filed claims, and original claims constitute their own description. Applicant, therefore, respectfully solicit withdrawal of the imposed objection to claims 12-17.

(2) The format "selected from the group consisting of ... " has consistently been considered proper language.

(3) Maltz fails to teach detection of a node which *requires* re-configuration.

(4) Maltz fails to teach retrieving a set of configuration parameters associated with said workload.

(5) Maltz fails to teach producing a new generation of configuration parameters based upon the retrieved set of configuration parameters.

(6) Examiner fails to establish that one having ordinary skill in the art would have arrived at the claimed invention based upon the combination of Maltz and Nozawa.

20. In response to point (1), Examiner agrees that the term "machine readable storage" is part of the original filed claims, which constitute their own description. However, the objection as stated above requires applicant to make appropriate amendment to the description because the specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "machine readable storage".

21. In response to point (2), the term, "*the* group" is rejection under 33 U.S.C. 112, second paragraph, because the term "*the* group" is lacking antecedent basis (i.e., *the* group was never previously cited in the claims 7 and 13 or independent claims 6 and 12). Examiner suggests amending the term, "the group" to "a group".

22. In response to point (3), according to page 13, lines 10-18 of applicant's specification states "... the cluster of nodes can be monitored to identify when a change in configuration is appropriate. Changes in configuration can be appropriate when performance objectives are not met, when a node fails, when a node has become idle, when the workload has significantly changed, when a certain amount of time has passed, or upon the occurrence of any other suitable criteria" (i.e., detection of a node which *requires* re-configuration). In light of the specification, a node that requires reconfiguration is identified upon the occurrence of any suitable criteria. Similarly, Maltz teaches detecting a network element (node) which need scheduled collection/transmission of statistics (i.e., part of the reconfiguration process) upon an occurrence of criteria (e.g., certain amount of time has passed (i.e., schedule) or measured traffic is less than the mean traffic level (i.e., upon an occurrence of criteria)) ([0033], [0068]-[0069] and [0073]).

23. In response to point (4), on page 10, line 23 to page 11, line 2 of the remarks filed on 2/20/08, applicant states: "Moreover, Maltz does not teaching "retrieving a set of configuration parameters associated with said workload." Instead, as described in paragraph [0033], Maltz teaches computing network element configurations based upon (i) inputs that represent the traffic

demand on the network, (ii) knowledge of network topology, and (iii) policy information. Computing does not identically disclose retrieving." Maltz teaches data (configuration parameters) stored in the TMS Statistic Repository 610 is used as an input to the TMS algorithm ([0076] and [0033]). Maltz further teach the data stored is associated with traffic information collected from the network element (i.e., workload) ([0068]). For example, traffic information is collected by measuring the number of bytes that flow out a line card interface. This means the data (configuration parameters) associated with an element at a host must be retrieved from repository in order to be used as input.

24. In response to point (5), Maltz teaches configurations created for the network element (producing a new generation of configuration parameters) are based on output of the TMS algorithm ([0125]). As explained in point (2) above, the output of the TMS algorithm is based on the retrieved data from the repository (i.e., retrieved configuration parameter) as input to TMS algorithm ([0033] and [0068]). This means Maltz teaches producing a new generation of configuration parameters (creating new configuration based upon the output of TMS algorithm) based upon the retrieved set of configuration parameters (based on retrieved data from repository as input to TMS algorithm (i.e., old configuration)).

25. In response to point (6), as explained in point (3) above, Maltz teaches creating configuration parameters (new configurations) based on input of data retrieved from repository (old configurations). Similarly, Nozawa's teaching of genetic computer process is also based in part of old information to create new generation. In addition, Maltz teaches other algorithm such

as "genetic algorithm" can be used in the system ([0049]). Therefore, one having ordinary skill in the art would have been obvious to modify and to combine the teaching of Nozawa with Maltz.

26. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip C Lee/

Patent Examiner, Art Unit 2152